ProMED Update

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Yaws in Papua New Guinea

Yaws was thought to have been eradicated by mass treatment campaigns in the 1950s, using long-acting penicillin. It became a reportable disease in Papua New Guinea (PNG) in 1969, and in the following decades sporadic cases were noted in PNG and the Solomon Islands. A large resurgence from Kar Kar Island and N. Kiriwina Island, PNG, in the 1980s affected over 4000 people. More recently, further cases were reported from New Ireland in 1999 and by September 2001 an outbreak on New Britain Island involved over 3000 cases (www.Promedmail.org, September 2001, archive no. 20010906.2133). Spread is strictly person-to-person, and is associated with scant clothing, lack of soap, and unhygienic living conditions. A decline in rural health services may also be partly to blame. It has been suggested that yaws may in fact be endemic in these rural areas, many of which were inaccessible in the 1950s. Until poverty and poor living conditions are tackled, it will be difficult to truly eradicate this disease.

Human metapneumovirus: a newly identified respiratory pathogen

Human metapneumovirus (hMPV), a novel paramyxovirus, was first isolated last year from 28 children in The Netherlands with respiratory tract illness (Nature Medicine 2001; 7(6):719–724). Their clinical symptoms were similar to those caused by human respiratory syncytial virus, and ranged from upper respiratory tract disease to severe bronchiolitis and pneumonia. Serologic studies have shown that virtually all children in The Netherlands have been exposed to hMPV by the age of 5 years, and that the virus has been circulating in humans for at least 50 years. Recent reports on ProMED Mail from Brisbane, Australia described 38 confirmed cases of hMPV infection (ProMED archive no. 20020302.3663). There is currently no specific therapy for this virus, and management hinges on respiratory support and symptomatic relief. In addition, the discovery of hMPV complicates our efforts to control bronchiolitis and viral pneumonia in infants by vaccination. The possible avian origin of this human pathogen is intriguing. There are four serotypes of Turkey rhinotracheitis virus (also called avian pneumovirus), and hMPV shows closest resemblance by phylogenetic analysis to avian pneumovirus type C, which is found predominantly in domestic fowl in the USA. It is interesting to note that 15 new paramyxoviruses (including nipah and hendra viruses) have been discovered in the past 40 years in various animal hosts. Several new paramyxoviruses have been associated with disease in humans, domestic livestock and wild animals (ProMED archive no. 20010719.1404).

Ebola hemorrhagic fever in Gabon: gorilla-to-human?

In the last issue of IJID, we reported on the outbreak of Ebola hemorrhagic fever in Gabon and the Republic of Congo. The most recent figures according to the Gabonese Ministry of Health (as of 4 April 2002) indicate that there have been 65 confirmed cases of Ebola fever in Gabon, including 53 deaths, and 53 contacts still being followed. The most recent cases were reported in villages north of Mekambo and resulted from contact with a gorilla, whose remains were found to be positive for Ebola virus when tested (ProMED archive number 20020409.3915). Reports do not mention which diagnostic test was employed, and the WHO Disease Outbreak News (9 April 2002) does not clarify whether this result was attained by viral isolation, PCR, or serology. However, it is the first positive result supporting the hypothesis that this and other Ebola fever outbreaks may be associated with the harvesting of bush meat for human consumption.

In the Republic of Congo, there have been 32 confirmed cases of Ebola infection, including 20 deaths in the Mbomo district, Cuvette Region (as of 29 March 2002), and 25 confirmed cases, including 23 deaths, in villages in the Kelle district (as of 1 April 2002). This brings the official running totals for the outbreak as a whole to 120 cases, with 96 deaths. Unofficially, an additional 25 suspected cases with 19 deaths have occurred to the northwest of Kelle (ProMED archive no. 20020323.3802), and there are suggestions from neigboring regions of further cases and deaths not included in the above totals. The remoteness and inhospitability of the border region between Gabon and the Republic of Congo, together with the suspicion of the local population, continue to thwart efforts to contain this outbreak. The WHO, Medecins sans Frontieres, the International Federation of Red Cross and Red Crescent Societies and other partners in the Global Outbreak Alert and Response Network are continuing to support the response.

Dengue fever

The dramatic increase this year in dengue fever in Brazil has been reported in a number of ProMED-mail postings. Of note (in ProMED-mail archive number 20020511.4163) is the fact that data reported in the WHO Update 2 (available at <http://www.who.int/disease-outbreak-news/n2002/may/8may2002.html>) indicated that, during the first quarter of 2002, a total of 317 787 cases of dengue fever, including 57 deaths, were recorded in Brazil. Rio de Janeiro State, with 41% of all reported cases, has been the most affected area.

Of particular concern is the finding that dengue serotype 3, which had not been found in Brazil prior to December 2000, is the cause of this outbreak. The presence of dengue serotype 3 and inadequate vector control are probably the causes for the dramatic increase in the number of cases of dengue hemorrhagic fever (DHF) that have been reported. There have been 571 DHF cases and 31 deaths within Rio de Janeiro State as of 25 April 2002. Dengue virus types 1 and 2 were the causes of prior epidemics of dengue in Brazil. There is concern that, in the future, dengue virus type 4, which has been found in Colombia, Venezuela, and Ecuador, may cause DHF if it is introduced into Brazil.

On a positive note, the epidemic curve has peaked, with a marked decrease in the number of dengue fever cases during April 2002 in Rio de Janeiro Municipality. Brazil's Health Minister Barjas Negri announced that, as a result of the decline in cases, the 1300 army and air force troops who participated in the campaign throughout Rio de Janeiro state to eradicate the *Aedes aegypti* mosquito were being demobilized. Rainer Oehme and Stefan Brockmann of the Baden-Wuerttemberg State Health Office noted (ProMED-mail archive number 20020322.3794) an in-press report of serologic surveillance of forestry workers, who are at high risk for Central European tick-borne encephalitis (TBE) and other tick-borne diseases due to occupational exposure. Of particular interest, antibody prevalence in this report of up to 27% was noted in areas in which there were no reports of clinical cases of TBE, suggesting that TBE occurs throughout the State of Baden-Wuerttemberg. The use of multi-temporal satellite imagery to generate predictive risk mapping of TBE in Germany suggests that the area of risk is larger than was previously known. In a ProMED-mail posting (ProMED-mail archive number 20020323.3805), Dr Sarah Randolph of the Oxford Tick Research Group noted that a risk map for TBE was derived by statistical matching of the observed distribution up to 1997 to multi-temporal satellite imagery. Interestingly, there are large areas in which the presence of TBE is predicted on the basis of the presence of environmentally suitable conditions in southern Germany, where TBE has not been noted to occur.